



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/526,761

03/07/2005

Antti Tolli

59643.00582

5829

32294

7590

11/16/2006

EXAMINER

HUYNH, NAM TRUNG

SQUIRE, SANDERS & DEMPSEY L.L.P.

14TH FLOOR

8000 TOWERS CRESCENT

TYSONS CORNER, VA 22182

ART UNIT

PAPER NUMBER

2617

DATE MAILED: 11/16/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 10/526,761	Applicant(s) TOLLI ET AL.	
	Examiner Nam Huynh	Art Unit 2617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 27 June 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-19 and 22-28 is/are rejected.
- 7) ☒ Claim(s) 20 and 21 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Response to Amendment*

This office action is in response to amendment filed on 6/27/2006. Of the original claims 1-21, claims 9, 10, and 12-16 have been amended and claims 22-28 have been added.

### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

3. Claims 1-18 and 22-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Palenius et al. (US 202/0019231) in view of Aalto (US 6,041,235).

A. Regarding claims 1, 12, 15, 14, 18, 22, and 26-28, Palenius et al. discloses a method and device for improved handover procedures in mobile communications systems (title). In the scope of the invention, an access network comprises several base stations (plurality of communication means) and a control node (RNC or network

Art Unit: 2617

element) (page 5, paragraph 45). In a first step of the method in a handover process, the access network commands the terminal to perform measurements for a selected measurement set of cells (page 6, paragraphs 50, 55). The command sent to the terminal may include parameter settings for a compressed mode (page 6, paragraph 51). However, Palenius et al. does not explicitly disclose that the selected measurement set of cells sent in the command from the access network to the terminal is ordered based upon information based upon a plurality of parameters associated with the base stations.

Aalto discloses a handover method and arrangement for a communication system (title). In the scope of the invention, a base station monitors (measures) uplink signal level and quality received from each mobile station served by the base station and transmits the measurement results to a base station controller (BSC) or mobile switching center (MSC) (provides information associated with the communications means to the network element) (column 4, lines 42-48). The BSC then determines candidate cells for handover in accordance with these measurements and places the candidate cells in an order with certain priority levels by using criteria such as the load in the cells, or interference levels (parameters associated with the plurality of communication means). The main principle in the use of the priority levels is that the cells with higher priority are preferred to those with lower priority (column 5, lines 1-26). Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the invention of Palenius et al., to allow the control node to receive measurements from the base stations and prioritize the selected

Art Unit: 2617

measurement set of cells sent in the command to the terminal based upon these measurements, as taught by Aalto, in order to instruct the terminal to make compressed mode measurements on a defined number of cells with the best quality received by the terminal.

B. Regarding claims 2 and 6, Palenius et al. discloses that measurement results are evaluated in a decision whether an intersystem handover between two different access networks (radio access technologies) or a handover between different cells (different communication means) within one of the access networks is to be performed (page 5, paragraph 46).

C. Regarding claim 3, Palenius et al. discloses that the second access network uses a different frequency band (page 5, paragraph 46).

D. Regarding claims 4-5 and 7-8, although Palenius et al. discloses a WCDMA system for access network one and a GSM system for access network two as an example, it is inherent that the second access network can be a CDMA network since it operates on a different frequency (page 5, paragraphs 45-46).

E. Regarding claims 9-10, Palenius et al. discloses that cell measurement results by the terminal may include chip energy per total received channel power density or received signal code power (signal strength).

F. Regarding claim 11, Palenius et al. discloses the selection of suitable cells for measurement may include the identity of the cell (page 7, paragraph 62).

G. Regarding claim 13, Aalto teaches a prioritizing (giving a weighting value) for each cell in a candidate list (column 5, lines 5-7).

Art Unit: 2617

H. Regarding claims 16-17, Palenius et al. discloses a core network (radio resource management/server) that controls the control node (page 5, paragraph 45).

I. Regarding claim 23, Aalto teaches that the cells are prioritized by load or interference levels (parameters associated with cells) (column 5, lines 5-24).

J. Regarding claims 24-25, the limitations are rejected as applied to claims 1-3.

4. Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ohlsson et al. (US 2002/0068571) in view of Lindquist et al. (US 2004/0235478).

Ohlsson et al. discloses a dynamic offset threshold determination unit, which establishes a dynamic offset threshold for starting soft handover. The dynamic offset threshold is based on the probability that the mobile station will engage in the handover that is based on handover history of other mobile stations previously and similarly traveling and of the same signal strength (abstract). However, Ohlsson et al. does not explicitly disclose that statistics are collected on the handovers from a cell to a plurality of other cells and that these statistics are weighted. Lindquist et al. discloses a method of ranking neighbor cells as candidates for a handover (title). In the scope of the invention, for a first cell, handover statistics on how frequent each member in a set of neighbor cells are involved in handovers is registered and ranked (weighted) based on this data collected (figure 3A and page 4, paragraphs 47, 48). Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the dynamic offset threshold determination unit, to take into account handover statistics on each cell in a neighbor list and rank them, as taught by Lindquist et al., in order to increase the probability that the most suitable cells are in an Active Set

Art Unit: 2617

supporting communication between a network and mobile station when the capacity for performing downlink radio transmission measurements is limited.

***Allowable Subject Matter***

5. Claims 20 and 21 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Response to Arguments***

6. Applicant's arguments with respect to claims 1-28 have been considered but are moot in view of the new ground(s) of rejection.

***Conclusion***


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nam Huynh whose telephone number is 571-272-5970. The examiner can normally be reached on 8 a.m.-5 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, George Eng can be reached on 571-272-7495. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2617

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

NTH  
11/7/06

  
GEORGE ENG  
SUPERVISORY PATENT EXAMINER